

Remarks

Applicants have carefully reviewed the Office Action dated September 18, 2007. Claims 1-44 are pending. Examiner's positions and arguments, as expressed in the Office Action of September 18, 2007, have been carefully considered and found to be inconsistent with the references and unpersuasive for the following reasons.

Claim Rejections – 35 USC §102

Claims 1,8-10, and 12-15 stand rejected over Chien (US 6,165,163). Examiner has taken a position that the Chien reference teaches all elements of the claims in question citing Chien's element 200 as an elongate shaft, element 202 as a coil assembly including a first coil defining a lumen, a second coil disposed around the first coil, wherein the coil assembly is attached to the distal end 206 of the shaft and the lumen of the shaft is in fluid communication with the lumen of the first coil. In support of this position, in the Office Action dated April 4, 2007, Examiner presented a portion of Fig. 2 of Chien. An examination of Fig. 2 and the specification of Chien shows that element 200 is the entire catheter assembly which includes as an interior component braid 202, the braid being presented as a single entity throughout.

Examiner's characterization of Chien's entire catheter assembly 200 of Fig. 2 as the "elongate shaft having a proximal end and a distal end, and a lumen therethrough" creates a difficulty for his attempt to find correspondence between the elements of the two inventions in that if the braid, coatings, and other elements of 200 are the elongate shaft, it would seem to be impossible for the first coil and the second coil, said to be supplied by the braid, to form a separate coil assembly which conforms to the description of a "coil assembly attached to the distal end of the shaft and the lumen of the shaft is in fluid communication with the lumen of the first coil." If the coil assembly is the shaft, it cannot be attached to itself and it can not be in fluid communication with itself as those terms are conventionally employed. Following Examiner's suggestion leads to a coil assembly attached to the distal end of itself and in fluid communication with itself.

Applicants' invention, as clearly shown in Fig. 1 of the application and consistently described in the text, is a separate sheath (10) attached to the distal end of an elongate shaft (20) having a lumen (21) in fluid communication with the lumen formed by the first coil (22). The elongate shaft and the coil assembly are consistently identified as separate elements and their relationship, i.e. distal attachment, is clearly described in claim 1 as that between distinct, separately identified elements.

The word "shaft" appears only once in the Summary and Description of the Invention of Chein as a "shaft covering" 210 at col.11, lines 19-23. Examiner has, without appropriate justification, applied that term to the invention of Chein. Chein's braid, characterized as "situated within the catheter body" cannot be said to be wrapped around itself even if one is willing to accept Examiner's use of the descriptor "shaft" and his highly selective definition of "around" instead of the common dictionary definitions:

Encarta® World English Dictionary, North American Edition:
around CORE MEANING: a grammatical word used to indicate that something *surrounds a place or object* or is situated on or moves from place to place on all sides of it.

Webster's Revised Unabridged, 1913 Edition:
Around
1. On all sides of; *encircling*; encompassing; so as to make the circuit of; about.
(Emphasis added.)

As the dictionary definitions make clear, for the second coil to be wound "around" the first, it must everywhere surround the first coil and not be interior to it. This usage is fully consistent within the application as may be seen by examining the figures and specification, particularly as they relate to Fig. 2.

Similarly, to wind Chein's braid "around" his shaft 200, it must everywhere surround or encompass the shaft rather than being situated within it as a component. The grammatical structure of applicants claim 1 specifies that the elongate shaft (20) defining a lumen (21) is a separate element from the first coil (22) and subsequent second coil (24).

Chein has no identified elongated shaft having a lumen around which a first coil layer may be wound to define a lumen. Even granting Examiner's position that a braid may be said to comprise a first coil overlaid by a second coil (as opposed to being two or more interwoven coils), there is no shaft, and particularly no shaft having a lumen, until at least one of the coils of the braid is in place. In the specific case of Chein's shaft 200, distal braid member 200, proximal braid 204, polymeric coating 206, polymeric coating 208, shaft covering 210, proximal fitting 212, and radio opaque marker 218 must be in place before there is a shaft 200 around which one might be able to wind something. At that point, Chein fails to wind anything around his shaft 200.

Returning to the meaning of "braid" advanced by the Examiner in the currently pending Office Action as teaching overlying layers, *each* (Emphasis added.) definition of braid found in the Encarta® World English Dictionary, North American Edition, cited above, includes interwoven:

braid

Definition:

1. textiles **decorative silky cord**: a decorative and often silky cord or interwoven thread. Use: trimming, binding, decorating uniforms, edging for soft furnishings.
2. **something interwoven**: something that is made of three or more interwoven strands, e.g. a loaf of bread baked from woven strands of dough
3. hairdressing **interwoven strands of hair**: a length of hair divided into three or more interwoven strands and worn down the back

This would not allow a layer of a second coil to be wrapped "around" a first coil layer as specified in the claims and Fig. 2 of the pending application.

As noted in applicants' response to the first Office Action, the failure of Chein to supply all elements of the pending claim 1 effectively removes the §102 rejection. In particular, Examiner's characterization of the catheter assembly 200 of Chein as corresponding to the elongate shaft (20) of the pending application leaves Chein without

a coil assembly, a first coil defining a lumen, or a second coil wound around a first coil. As claims 8-10 and 12-15 depend from claim 1 and include additional elements, Applicants submit that they are also not anticipated by Chein.

Claim Rejections – 35 USC §103

The various §103 rejections all rely upon Chein and so are also inappropriate. The rejection of claims 2-7 as unpatentable over Chein in view of DeMello (US 5,429,597) relies upon DeMello to supply a multifilar coil as equivalent to the braid of Chein. For at least the reason that the Office admits that Chein's catheter 200 provides the elongate shaft of the pending claim 1 and thus has no separately identifiable coil assembly, the nature of DeMello's reinforced catheter is irrelevant since he also fails to provide a coil assembly. In addition, claims 2-7 depend from claim 1 and include all of the limitations thereof and additional elements. Claim 1 is now submitted to be allowable and so are its dependents.

The rejection of claim 11 as unpatentable over Chein in view of Sampson (US 6,143,013) relies upon Sampson to provide a catheter having a tapered section. Chein is already said to supply a shaft in the form of a catheter. The nature of Sampson's catheter, whether tapered or not, is irrelevant to claim 11 which requires the additional two layer coil assembly of claim 1, missing from both Chein and Sampson, to be tapered. Substitution of the catheter of Simpson for the catheter of Chein as the shaft of the pending application fails to provide all of the elements of claim 1 from which claim 11 depends, much less the tapered coil assembly of claim 11. For at least this reason, the rejection is submitted to be inappropriate.

The rejection of claims 16, 23-25, 27-31, 38-40, and 42-44 over Ginsburg (US 4,873,978) in view of Chein. As noted above, Chein's catheter 200 is said to provide the shaft of the pending claim. Substituting Chein's catheter for the catheter of Ginsburg as the shaft (20) of the pending application does not provide a coil assembly missing from

the combination of Ginsburg and Chein. Absent a coil assembly attached to the distal end of the shaft, Ginsburg and Chein fail to provide all elements of claim 16 and 31 and so do not provide all of the elements of the claims which depend from them. For at least this reason, the rejection is inappropriate.

The rejection of claims 17-22 and 32-37 as unpatentable over the combination of Ginsburg and Chein as applied above and in further view of DeMello is said to overcome the deficiencies of the combination of Ginsburg and Chein by replacing the braid in the catheter of Chein with the multifilar coils of DeMallo in the elongate shaft (20) of the pending application. Other than having a lumen, the structure of the shaft (20) of any of Ginsburg, Chein, and DeMello, or combinations thereof, is irrelevant to the absence of a coil assembly attached to the distal end of the shaft. Absent a coil assembly attached to the distal end of the shaft, Ginsburg and Chein in view of DeMello fail to provide all elements of claim 16 and 31 and so do not provide all of the elements of the claims which depend from them. For at least this reason, the rejection is inappropriate.

The rejection of claims 26 and 41 as unpatentable over Ginsburg and Chein in view of Sampson relies upon Sampson to provide a catheter having a tapered section. Ginsburg and/or Chein is already said to supply a shaft in the form of a catheter. The nature of Sampson's catheter, whether tapered or not, is irrelevant to claims 26 and 41 which require the additional two layer coil assembly of claim 1, missing from Ginsburg, Chein, and Sampson, to be tapered. Substitution of the catheter of Simpson for the catheter of Ginsburg or the catheter of Chein as the shaft of the pending application fails to provide all of the elements of claims 16 and 31 from which claims 26 and 41, respectively, depend, much less the tapered coil assembly of claims 26 and 41. For at least this reason, the rejection is inappropriate.

In summary, each of the independent claims 1, 16, and 31 have been shown to be patentably distinct from each of the references cited by virtue of the presence of an element, a coil assembly comprising a first and second coil attached to an elongate shaft absent from the references taken alone or in combination.

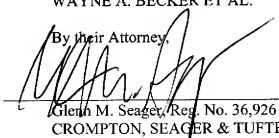
Reconsideration is respectfully requested. It is respectfully submitted that the claims are now in condition for allowance, issuance of a Notice of Allowance in due course is requested. If a telephone conference might be of assistance, please contact the undersigned attorney at (612) 677-9050.

Respectfully submitted,

WAYNE A. BECKER ET AL.

By their Attorney,

Date: Nov. 14, 2007



Glenn M. Seager, Reg. No. 36,926
CROMPTON, SEAGER & TUFTE, LLC
1221 Nicollet Avenue, Suite 800
Minneapolis, Minnesota 55403-2420
Tel: (612) 677-9050